



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,478	07/01/2003	Frank B. Wyatt II	9040-21IP	3302
20792	7590	11/02/2005	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			NGUYEN, CHAU N	
PO BOX 37428				
RALEIGH, NC 27627			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/611,478	WYATT ET AL.	
	Examiner	Art Unit	
	Chau N. Nguyen	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 September 2005.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-56 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-56 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature of the dielectric layer can cored from the cable with a standard coring tool such that less than a 360 degree residue remains on the inner surface of the outer conductor as claimed in claims 18 and 34 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing

sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8, 10-13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Moe et al. (5,959,245).

Moe et al. discloses a coaxial cable (Figure 1, cols 3 and 4) comprising a metallic inner conductor formed of a first material and having a first thickness, a dielectric layer circumferentially surrounding the inner conductor formed of a second material and having a second thickness, a metallic outer conductor circumferentially surrounding the dielectric layer of a third material and having a third thickness, and a polymer jacket circumferentially surrounding the outer

conductor formed of a fourth material and having a fourth thickness, the first material being copper (re claim 10), the second material being a foamed polymeric material (re claim 11), the dielectric layer having a density gradient across its cross-section such that density increases with increasing radial distance from the inner conductor (re claim 12), and the third material being copper (re claim 13). Re claims 1-8 and 16, the cable of Moe et al. comprises structure and materials as claimed. Accordingly, the properties and characteristics as recited in the claimed invention are inherent from the cable of Moe et al.

4. Claims 1, 17-25, 27, 28, 30, 33-41, 43, 44, 46 and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Ziemek et al. (5,831,215).

Ziemek et al. discloses a coaxial cable (Figures 1-5) comprising a metallic inner conductor formed of a first material and having a first thickness, a dielectric layer circumferentially surrounding the inner conductor formed of a second material and having a second thickness, a metallic outer conductor circumferentially surrounding the dielectric layer of a third material and having a third thickness, and a polymer jacket circumferentially surrounding the outer conductor formed of a fourth material and having a fourth thickness (re claims 1, 18 and 34), wherein the dielectric layer can be cored from the cable with a

conventional coring tool such that less than a 360 degree residue remains on the inner surface of the outer conductor (re claims 17, 18 and 34), the first material being copper (re claims 27 and 43), the second material being a foamed polymeric material (re claims 28 and 44), the third material being copper (re claims 30 and 46). Re claims 1, 18-25, 33-41 and 49, the cable of Ziemek et al. comprises structure and materials as claimed. Accordingly, the properties and characteristics as recited in the claimed invention are inherent from the cable of Ziemek et al.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moe et al.

Claim 9 additionally recites the cable having a length of at least 1,000 feet. Although not disclosed by Moe et al. it would have been obvious that depending on the specific use of the resulting cable such as providing transmission between a long distance, one skilled in the art would modify the cable of Moe et al. to have at least one 1,000 feet since cables having a length of at least 1,000 feet are known in the art.

8. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moe et al. in view of Martin (4,343,660).

Claims 14 and 15 additionally recite a dry corrosion-resistant material being interposed between the outer conductor and the jacket. Martin discloses a method of inhibiting corrosion in copper by coating copper with a barrier of a dry corrosion-resistant material (sulfonates, see the abstract). It would have been obvious to one skilled in the art to provide a barrier of a dry corrosion-resistant

material as taught by Martin between the outer (copper) conductor and the jacket of Moe et al. to prevent the corrosion of copper.

9. Claims 26 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziemek et al.

Claims 26 and 42 additionally recite the cable having a length of at least 1,000 feet. Although not disclosed by Ziemek et al. it would have been obvious that depending on the specific use of the resulting cable such as providing transmission between a long distance, one skilled in the art would modify the cable of Ziemek et al. to have at least one 1,000 feet since cables having a length of at least 1,000 feet are known in the art.

10. Claims 29 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziemek et al. in view of Moe et al.

Claims 29 and 45 additionally recite the dielectric layer having a density gradient across its cross-section such that density increases with increasing radial distance from the inner conductor. Moe et al. discloses a cable comprising a dielectric layer having a density gradient across its cross-section such that density increases with increasing radial distance from an inner conductor. It would have

been obvious to one skilled in the art to apply the teaching of Moe et al. in the cable of Ziemek et al. to permit reduced densities along the inner conductor as taught by Moe et al.

11. Claims 31, 32, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziemek et al. in view of Martin.

Claims 31, 32, 47 and 48 additionally recite a dry corrosion-resistant material being interposed between the outer conductor and the jacket. Martin discloses a method of inhibiting corrosion in copper by coating copper with a barrier of a dry corrosion-resistant material (sulfonates, see the abstract). It would have been obvious to one skilled in the art to provide a barrier of a dry corrosion-resistant material as taught by Martin between the outer (copper) conductor and the jacket of Ziemek et al. to prevent the corrosion of copper.

12. Claims 50-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chraplyvy et al. (6,205,268) in view of Moe et al.

Chraplyvy et al. discloses the invention substantially as claimed in claims 50-56 except for two coaxial cables as claimed in claim 1. Moe et al. discloses a coaxial cable comprising the invention as claimed in claim 1. It would have been

obvious to one skilled in the art to use coaxial cables as taught by Moe et al. in the network of Chraplyvy et al. since the cable of Moe et al. has enhanced bending and handling characteristics and is an improved low-loss and improved attenuation properties coaxial cable.

Response to Arguments

13. Applicant's arguments filed Sept. 23rd, 2005 have been fully considered but they are not persuasive.

Regarding the drawing objection, applicant argues that the feature of the dielectric being cored with a standard coring tool such that less than a 360 degree residue remains on the inner surface of the outer conductor, is unnecessary for illustration since those skilled in the art would understand the language of the claim without illustration. This argument is not found persuasive. According to 37 CFR 1.83(a), the drawings must show every feature of the invention specified in the claims. Moreover, the feature of a dielectric being cored with a standard coring tool such that less than a 360 degree residue remains on the inner surface of an outer conductor is not a common feature that is disclosed in every known cable.

Regarding the Moe reference, applicant argues that Moe cannot anticipate claims 1-8, 10-13, and 16. Applicant states that the Office Action appears to be

taking the position that, because the cable disclosed in Moe has an inner conductor, a dielectric layer, an outer conductor, and a jacket, it inherently possesses the properties recited in claim 1. This argument is not found persuasive. In the claimed invention, claims 10-13 depend on claim 1 and respectively recite the first material being copper, the second material being a foamed polymeric material, the dielectric layer having a density gradient across its cross-section such that density increases with increasing radial distance from the inner conductor, and the third material being copper. Moe not only discloses a cable comprising an inner conductor formed of a first material and having a first thickness, a dielectric layer formed of a second material and having a second thickness, an outer conductor formed of a third material and having a third thickness, and a jacket formed of a fourth material and having a fourth thickness. Moe also discloses the first material being copper, the second material being a foamed polymeric material, the dielectric layer having a density gradient across its cross-section such that density increases with increasing radial distance from the inner conductor, and the third material being copper. Moe discloses a cable comprising the structure and material as claimed, therefore the properties recited in the claims would be inherent from the cable of Moe.

Likewise, the response set forth above would be applied to the Ziemek reference. Specifically, Ziemek not only discloses a cable comprising an inner conductor formed of a first material and having a first thickness, a dielectric layer formed of a second material and having a second thickness, an outer conductor formed of a third material and having a third thickness, and a jacket formed of a fourth material and having a fourth thickness. Ziemek also discloses the first material being copper, the second material being a foamed polymeric material, and the third material being copper. Accordingly, the properties recited in the claims would be inherent from the cable of Ziemek since it comprises the structure and material as claimed.

Applicant then argues that Ziemek discusses the removal of dielectric material from the inner conductor prior to the application of the outer conductor, but this process step does not disclose or suggest the removal of the dielectric layer from the outer conductor with a conventional coring tool. This argument is not found persuasive. The fact that Ziemek teaches removing the dielectric prior to the application of the outer conductor, does not prevent Ziemek from anticipating the claimed invention. The patentability of a product claim is determined by the novelty and nonobviouness of the claimed product itself without consideration of the process for making it which is recited in the claim. In re Thorpe, 227 USPQ

964. Furthermore, the claimed invention recites the dielectric being cored from the cable not from the outer conductor such that less than a 360 degree residue remains on the inner surface of the outer conductor. Ziemek does disclose the dielectric layer being cored from the cable such that less than a 360 degree residue remains on the inner surface of the outer conductor.

Summary

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chau N Nguyen
Primary Examiner
Art Unit 2831